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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,088	01/17/2002	Satoshi Hirano	JP000026	7999

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P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT	PAPER NUMBER
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2675

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DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,088	HIRANO ET AL.	
	Examiner	Art Unit	
	Srilakshmi K. Kumar	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Pre-Amendment A, filed January 17, 2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 2, is objected to because of the following informalities: Claim 2 is defined as being dependent upon itself. Appropriate correction is required. Examiner will regard claim 2 to be dependent upon independent claim 1 for the rejection below.
2. Claim 1 and 4 are objected to because of the following informalities: With respect to claim 1, line 11, a miss-spelled word ---idensifying--- should be corrected to “intensifying”. With respect to claim 4, line 7 ---Ymiu--- in the equation should be corrected to “Ymin”. Appropriate correction is required.

Information Disclosure Statement

3. The information disclosure statement filed April 24, 2002 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered. Examiner requests applicant to submit a PTO-1449 for consideration and initialiing.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanioka (EP 0 541 295 A2).

As to independent claim 1, Tanioka discloses a liquid crystal display apparatus capable of color displaying provided with crystal panel having, in each main pixel unit, red, green, blue outputting subpixels and a luminance intensifying subpixel (pg. 3, lines 25-37) characterized by comprising, data calculating means for obtaining a digital value for driving a luminance intensifying subpixel by carrying out a predetermined calculation processing using digital values respectively for red, green, blue inputting pixels which are obtained from an input image (pg. 3, lines 25-37, pg. 4, lines 50-54), wherein said liquid crystal displaying apparatus driving the red, green, blue outputting subpixels and a luminance intensifying subpixel by using said digital value for driving said luminance intensifying subpixel obtained by said data calculating means and said digital values of said red, green and blue inputting subpixels (pg. 3, lines 25-37, pg. 4, lines 50-54), characterized in that, said predetermined calculation processing by said data calculating means obtains said digital value for driving said luminance intensifying subpixel by a function of $W=f(Y_{min}, Y_{max})$ where said digital value of said luminance intensifying subpixel is defined as W , and a minimum value and a maximum value of said digital values of said red, green, and blue inputting subpixels are respectively defined as Y_{min} and Y_{max} (pg. 6, line 16-pg. 7, line 37).

As to dependent claim 2, limitations of claim 1, and further comprising, wherein said function of $W=f(Y_{min}, Y_{max})$ is directed to a function which is monotonously increased as said Y_{min} value or said Y_{max} value becomes larger (pg. 6, line 16-pg. 9, line 45).

As to dependent claim 3, limitations of claim 1, and further comprising, wherein said function of $W=f(Y_{min}, Y_{max})$ is directed to a function in which said Y_{min} is a variable value

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and said Ymax is a constant value and which is monotonously increased as said Ymin value becomes larger (pg. 6, line 16-pg.9, line 45).

As to dependent claim 4, limitations of claim 1, limitations of claim when α , β and n are predetermined real numbers and when a maximum value which digital values of said red, green, and blue inputting subpixels can take is defined as MAX, said function of $W=f(Y_{min}, Y_{max})$ is represented by a function of $W=Max^* \{(Y_{min}+\alpha) + (MAX + \beta)\}^n$ by which a digital value for driving said luminance intensifying subpixel is obtained (pg. 6, line 16-pg.9, line 45).

As to dependent claim 5, limitations of claim 1, and further comprising, wherein a digital value of any of the said red, green and blue inputting subpixels is a zero value, a value of W is zero(pg. 6, line 16-pg.9, line 45).

As to dependent claim 6, limitations of claim 1, and further comprising, storing means (pg. 2, lines 22-53) for storing a plurality of kinds of functions each represented by said function of $W=f(Y_{min}, Y_{max})$; and selecting means for selecting any of said plurality of kinds of functions represented by said function of $W=f(Y_{min}, Y_{max})$ stored by said storing means(pg. 6, line 16-pg.9, line 45).

As to dependent claims 7 and 8, limitations of claim 1, and further comprising, wherein said red, green and blue outputting subpixels are arranged to form a main pixel unit without using said subpixel for luminance in accordance with a predetermined control signal, thereby to enable the apparatus to be used as a liquid crystal display apparatus capable of color displaying (pg. 2, lines 22-53, pg. 3, lines 18-24).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 703 306 5575. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J. Saras can be reached on 703 305 9720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Srilakshmi K. Kumar
Examiner
Art Unit 2675

SKK
March 20, 2004


CHANH NGUYEN
PRIMARY EXAMINER